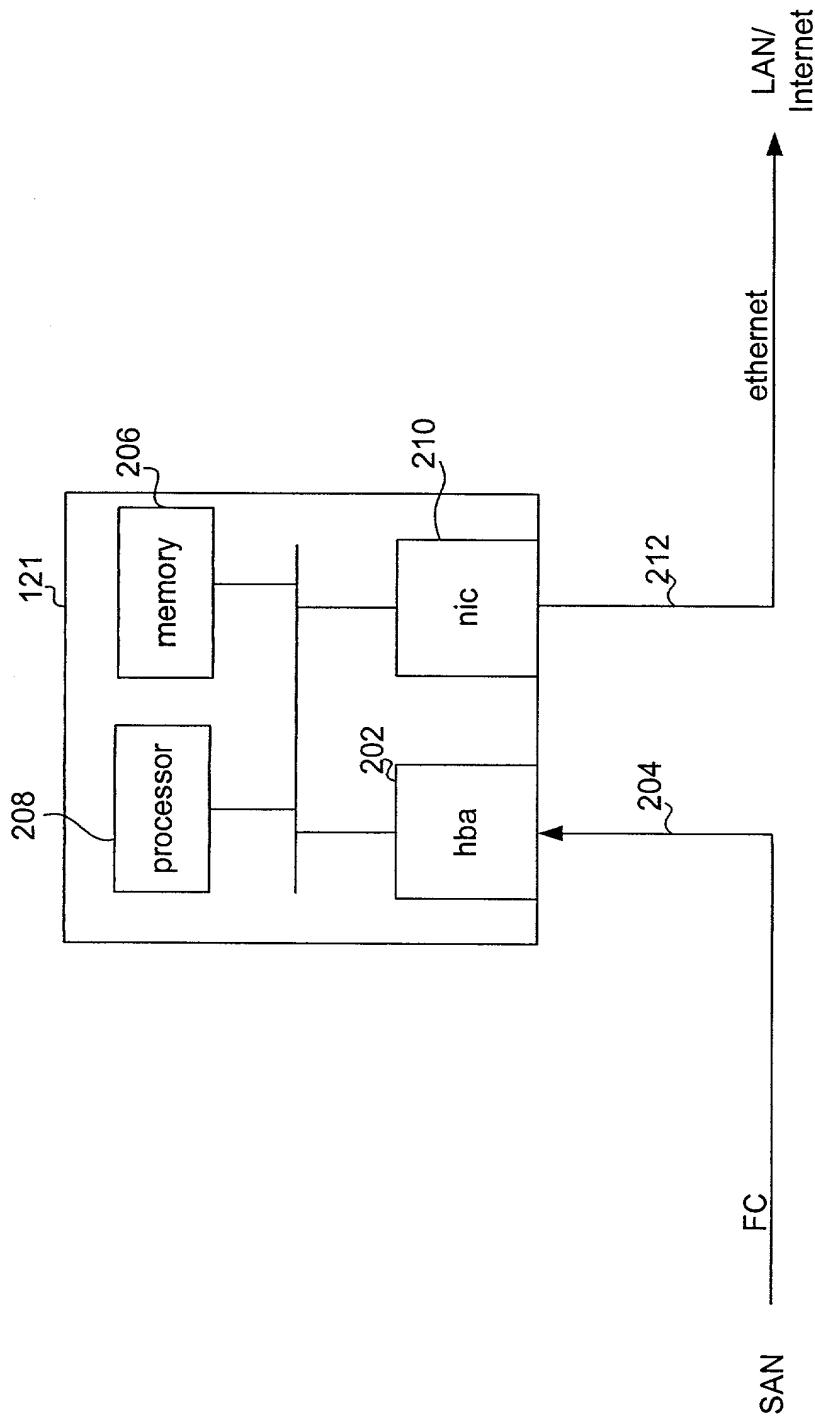


Fig. 1

Fig. 2



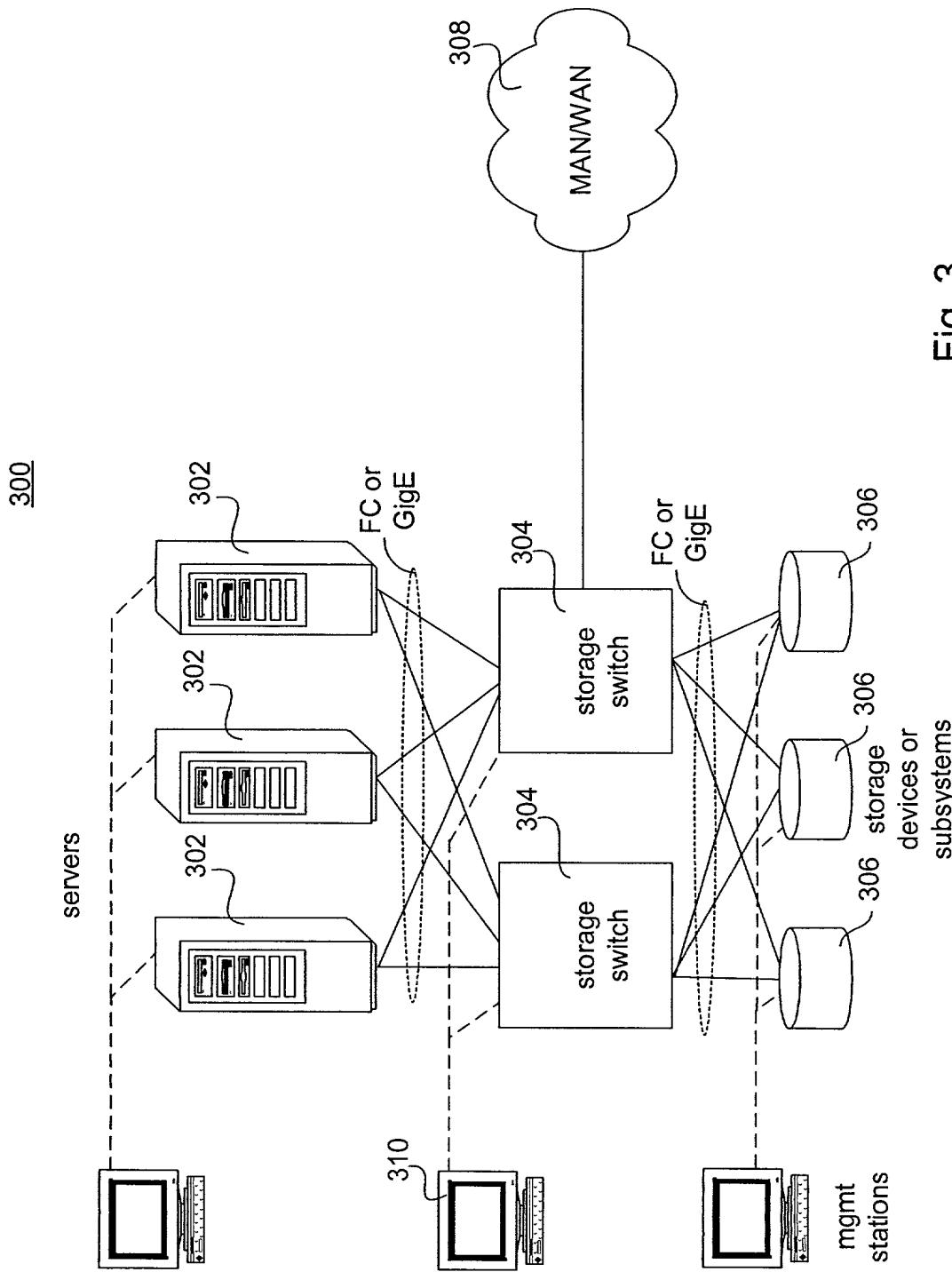
Attorney: Sarah Barone Schwartz Express Mail No.: EL670728857US

Attorney Docket No.: MARA-01000US1 SBS

Title: STORAGE SWITCH FOR STORAGE AREA NETWORK

Applicant: Santosh C. Loayekar et al.

Fig. 3



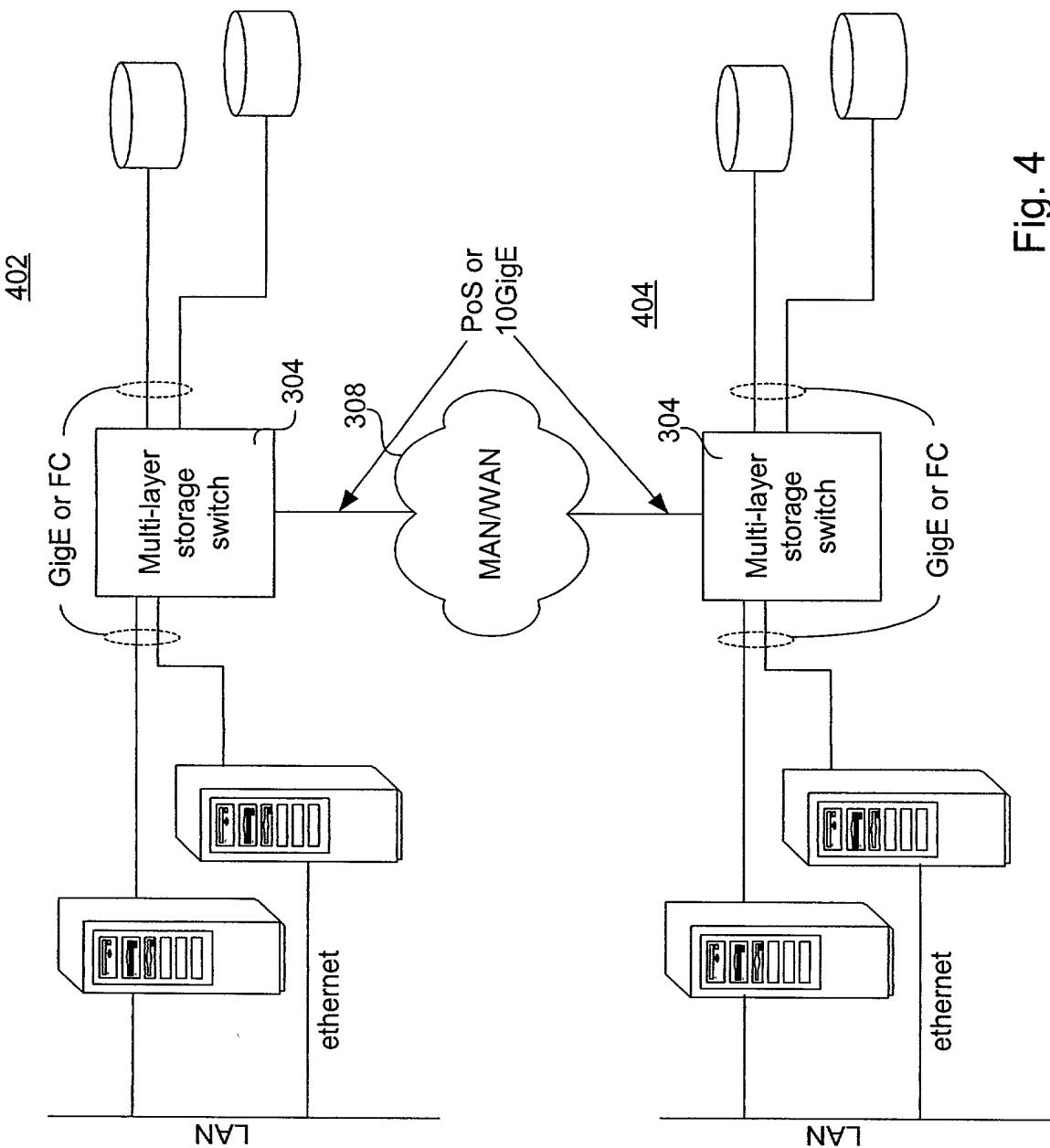
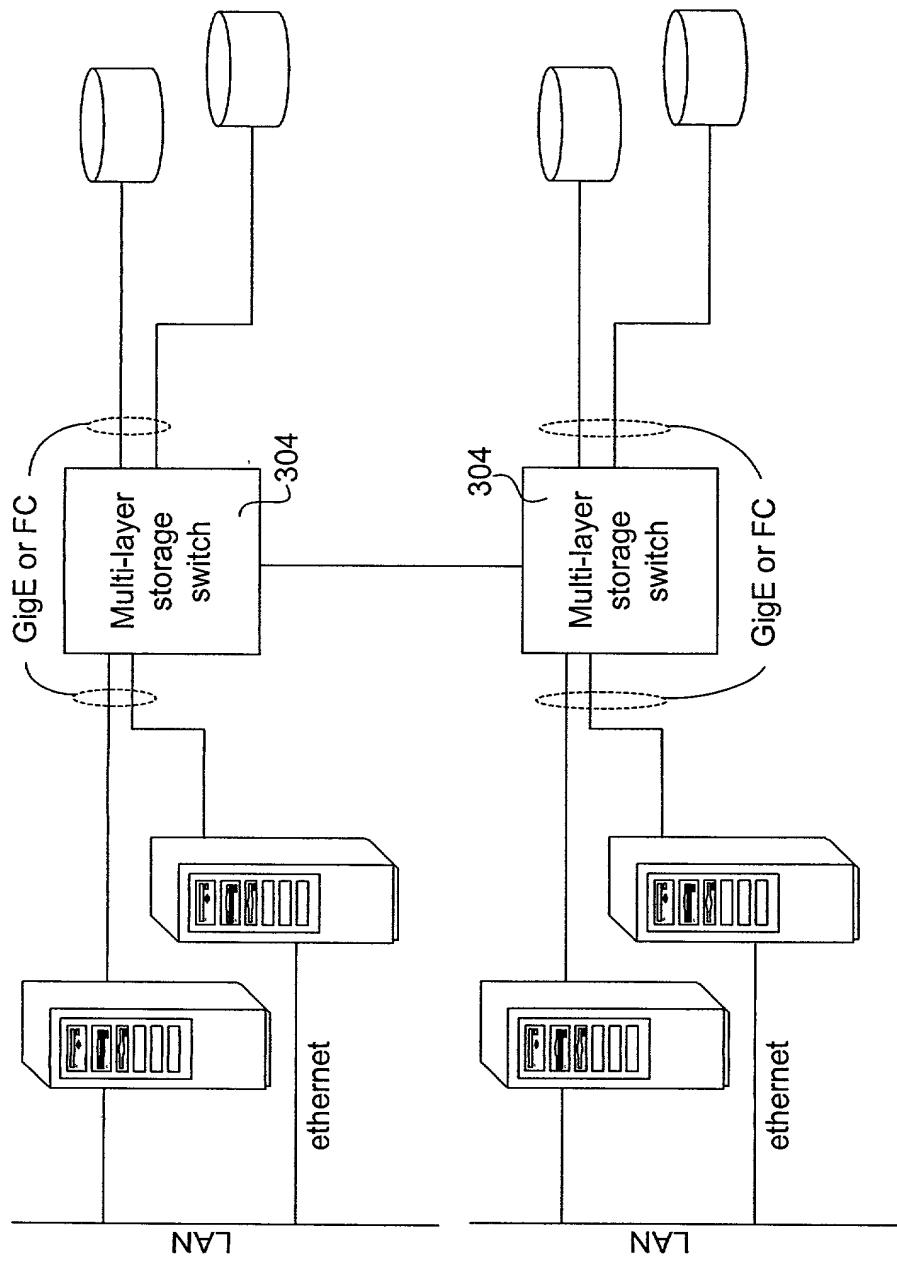


Fig. 4

Fig. 5



Attorney: Sarah Barone Schwartz Express Mail No.: EL670728857US

Attorney DocID: MARA-01000US1 SBS

Title: STORAGE SWITCH FOR STORAGE AREA NETWORK

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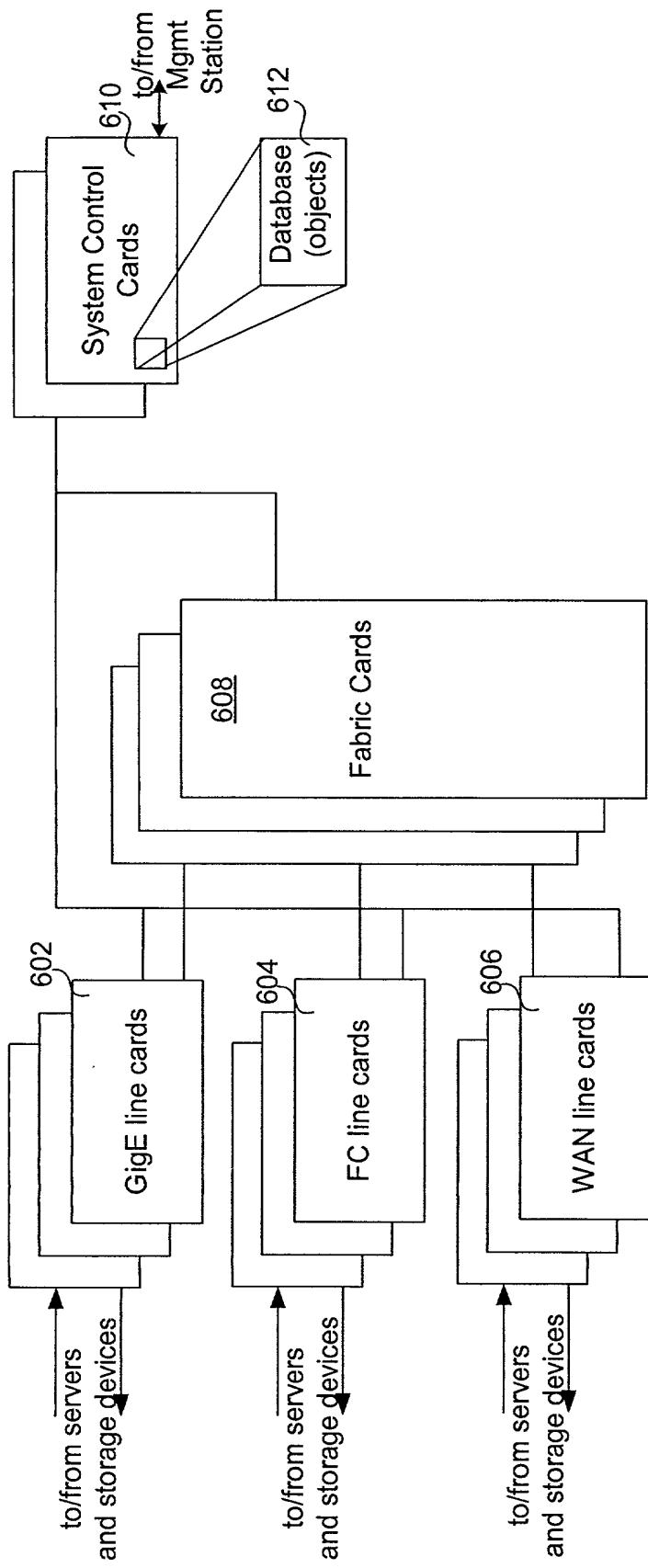
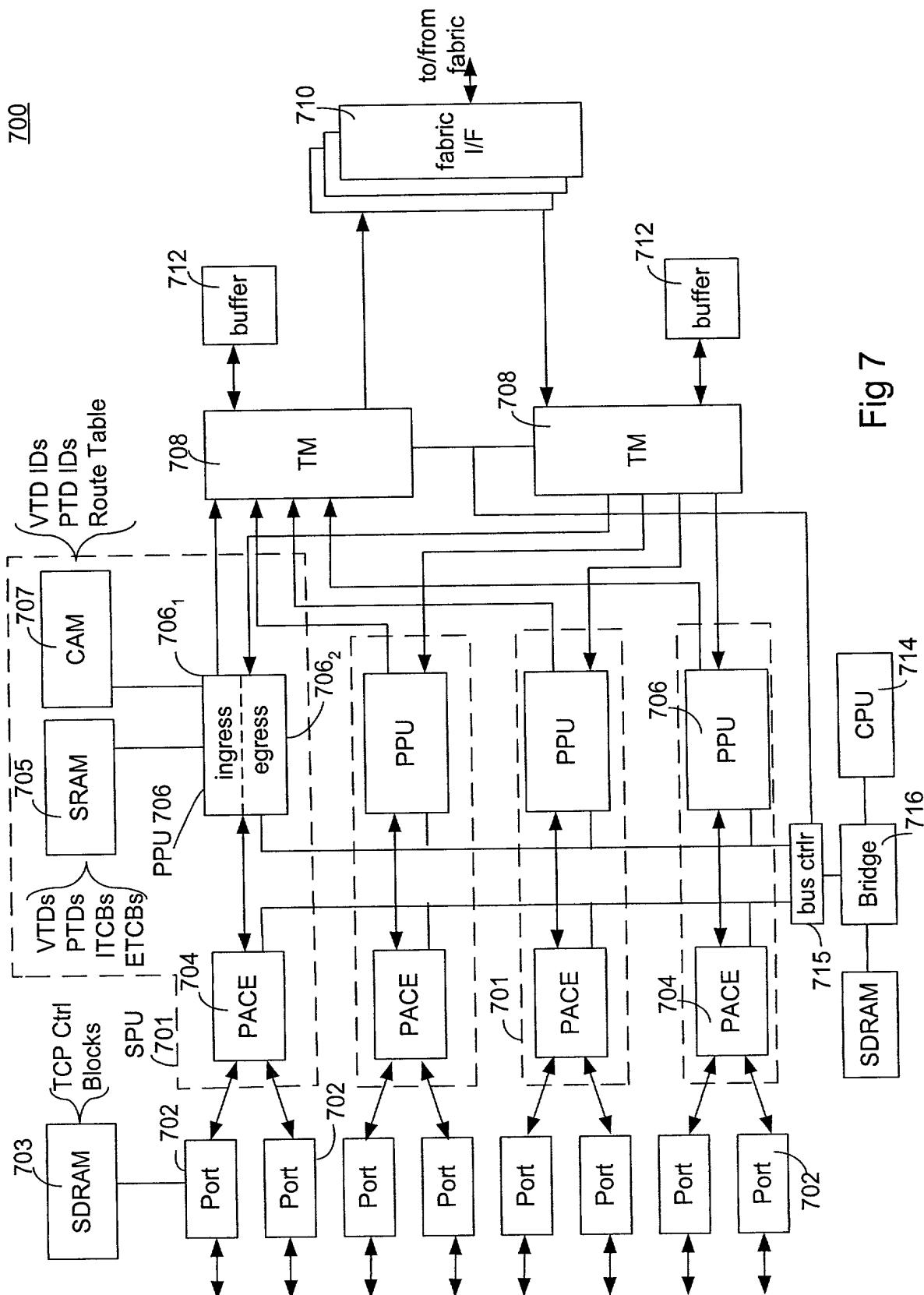


Fig. 6

Fig 7



VTD
VTD ID
FlowID
Extent Descriptors (e.g., size, location)
of outstanding commands
Max # of commands
Response time
LUN
TCP control block index
S_ID/D_ID
MaxCmdSN
Total open sequences

Fig. 7a

Byte	Byte 0	Byte 1	Byte 2	Byte 3	
0	X I	0x01	FRW 00 ATTR	Rsvd	CRN or Rsvd
4	TotalAHSLength	DataSegmentLength			
8	Logical Unit Number (LUN)				
16	Initiator Task Tag				
20	Expected Data Transfer Length				
24	CmdSN				
28	ExpStatSN or ExpDataSN				
32					
40	SCSI Command Descriptor Block (CDB)				
48					

iSCSI Command PDU

Fig. 8a

Byte	Byte 0	Byte 1	Byte 2	Byte 3	
0	1 1	0x31	1	Rsvd (0)	
4				Rsvd (0)	
8					
16	Initiator Task Tag				
20	Target Transfer Tag				
24	StatSN				
28	ExpCmdSN				
32	MaxCmdSN				
36	R2TSN				
40	Buffer Offset				
44	Desired Data Transfer Length				
48					

iSCSI R2T PDU

Fig. 8b

Byte	Byte 0	Byte 1	Byte 2	Byte 3
0	0 0 0x05	F	Rsvd (0)	
4	Rsvd (0)	DataSegmentLength		
8	LUN or Reserved (0)			
16				
20	Initiator Task Tag			
24	Target Transfer Tag or 0xffffffff			
28	Rsvd (0)			
32	ExpCmdSN			
36	Rsvd (0)			
40	DataSN			
44	Buffer Offset			
48	Rsvd (0)			
	Data			

iSCSI Write Data PDU

Fig. 8c

Byte	Byte 0	Byte 1	Byte 2	Byte 3
0	1 1 0x25	F O U S	Rsvd (0)	Status or Rsvd
4	Rsvd (0)	DataSegmentLength		
8	Rsvd (0)			
16				
20	Initiator Task Tag			
24	Rsvd (0)			
28	StatSN or Rsvd (0)			
32	ExpCmdSN			
36	MaxCmdSN			
40	DataSN			
44	Buffer Offset			
48	Residual Count			
	Data			

iSCSI Read Data PDU

Fig. 8d

	Byte 0	Byte 1	Byte 2	Byte 3	
0	1 1 0x21	1 rsv 0 u 0 0	Status	Response	
4	Rsvd (0)	DataSegmentLength			
8	Rsvd (0)				
16	Initiator Task Tag				
20	Basic Residual count				
24	StatSN				
28	ExpCmdSN				
32	MaxCmdSN				
36	ExpDataSN or Rsvd (0)				
40	ExpR2TSN or Rsvd (0)				
44	Bidi-Read Residual Count				
48	Sense Data and Response Data (optional)				

iSCSI Response PDU

Fig. 8e

Applicant: Santosh C. Lolayekar et al.

Title: STORAGE SWITCH FOR STORAGE AREA NETWORK

Attorney Docket No.: MARA-01000US1 SBS

Attorney: Sarah Barone Schwartz Express Mail No.: EL670728857US

Bits Word	31-24	23-16	15-08	07-00
0	R_CTL		D_ID	
1	rsvd		S_ID	
2	TYPE		F_CTL	
3	SEQ_ID	DF_CTL	SEQ_CNT	
4	OX_ID		RX_ID	
5		RLTV_OFF		

FC Frame Header
Fig. 8f

Field Name	Description	Size
FCP_LUN	logical unit number	8 bytes
FCP_CNTL	control field	4 bytes
FCP_CDB	SCSI command descriptor block	16 bytes
FCP_DL	Data Length	4 bytes

FCP_CMND Payload
Fig. 8g

Field Name	Description	Size
DATA_RO	Relative offset of first byte of FCP_DATA IU that follows	4 bytes
BURST_LEN	length of FCP_DATA IU that follows	4 bytes
rsvd		4 bytes

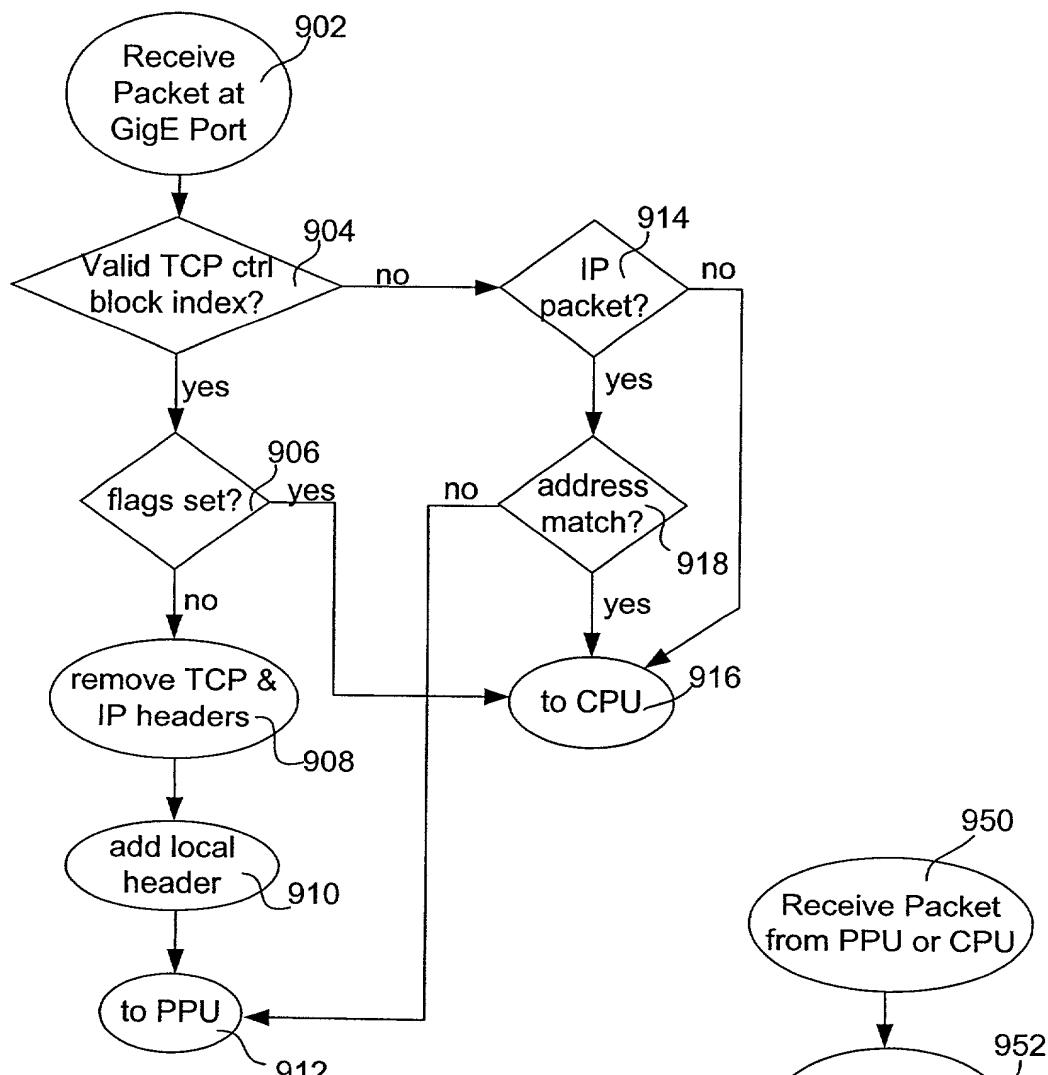
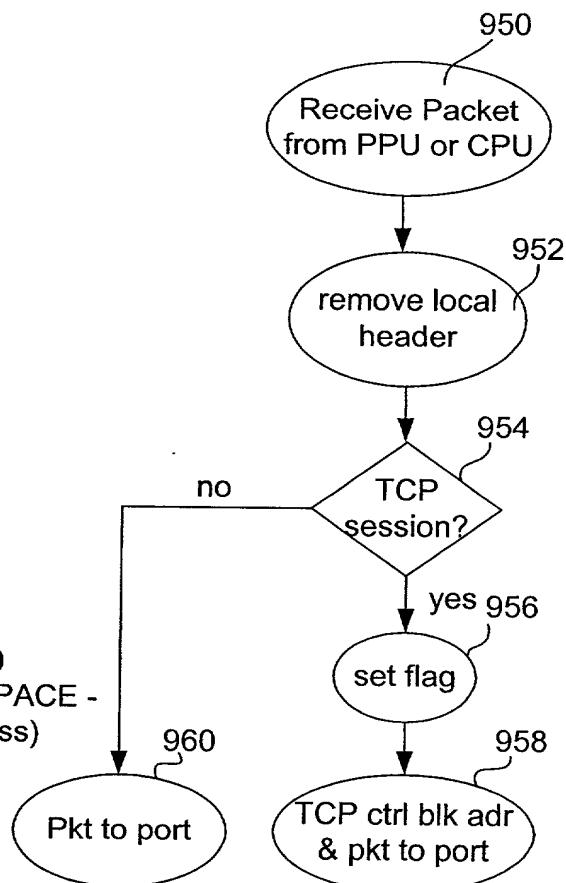
FCP_XFR_RDY Payload

Fig. 8h

Field Name	Description	Size
rsvd		4 bytes
rsvd		4 bytes
FCP_STATUS	field validity and SCSI status	4 bytes
FCP_RESID	residual count	4 bytes
FCP_SNS_LEN	Length of FCP_SNS_INFO field	4 bytes
FCP_RSP_LEN	Length of FCP_RSP_INFO field	4 bytes
FCP_RSP_INFO	FCP response info	m bytes
FCP_SNS_INFO	FCP sense info	n bytes

FCP_RSP Payload

Fig. 8i

**Fig 9a**(Classification - PACE -
iSCSI - ingress)**Fig 9b**
(Classification - PACE -
iSCSI - egress)

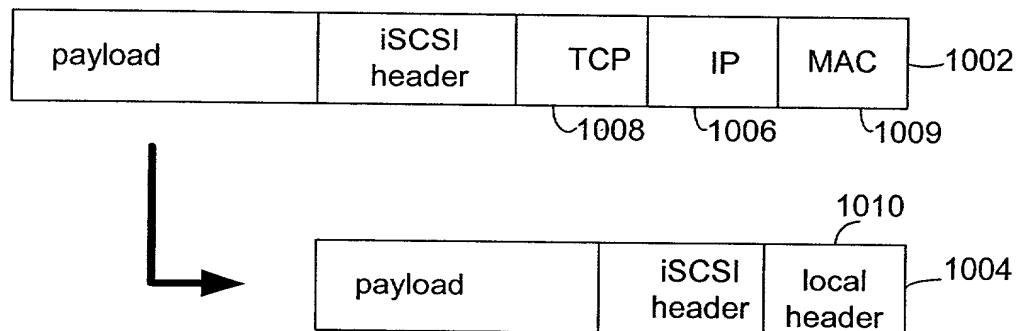


Fig. 10a

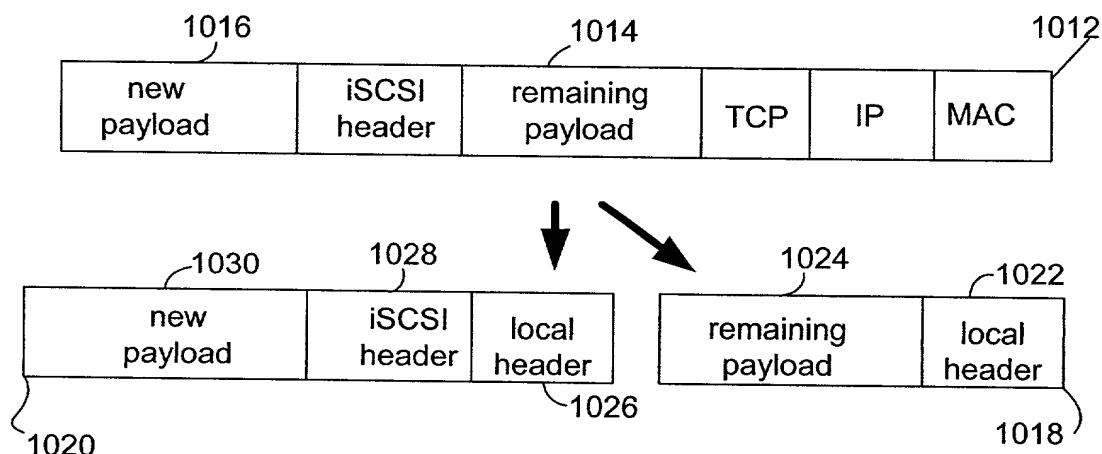


Fig. 10b

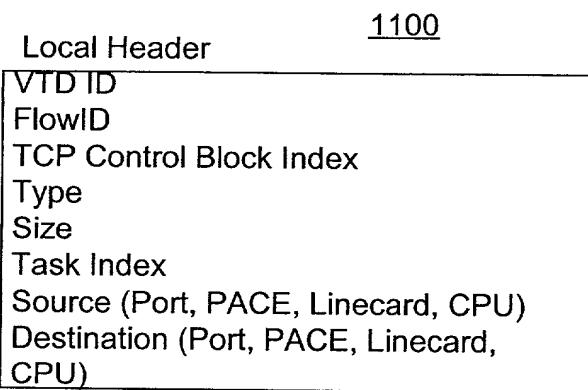


Fig. 11

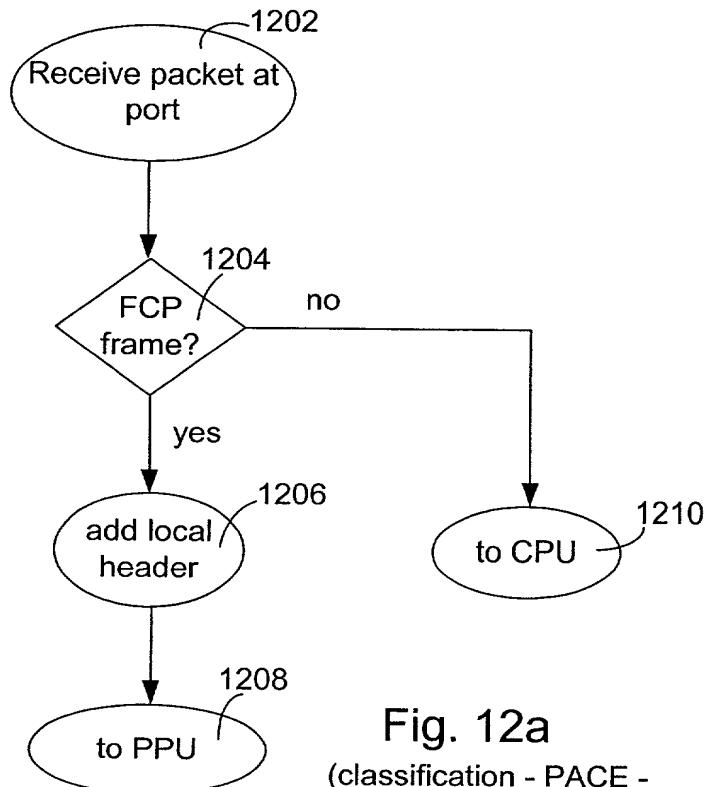


Fig. 12a
(classification - PACE -
FCP - ingress)

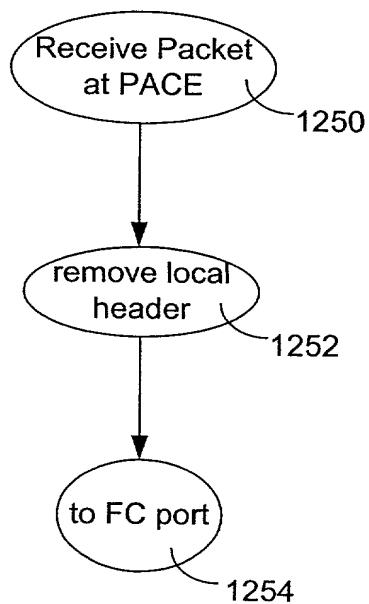


Fig. 12b
(classification - PACE -
FCP - egress)

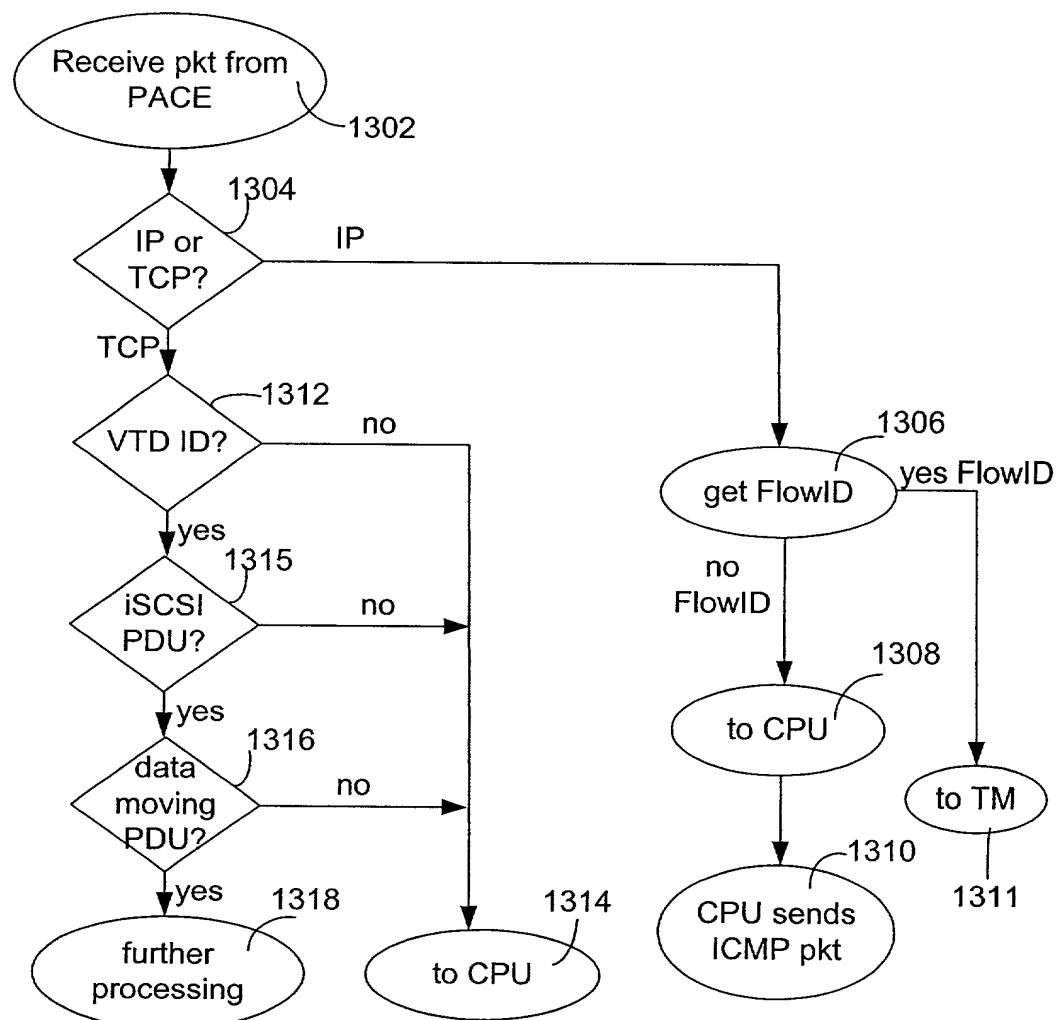


Fig. 13a
(Classification - PPU -
ingress)

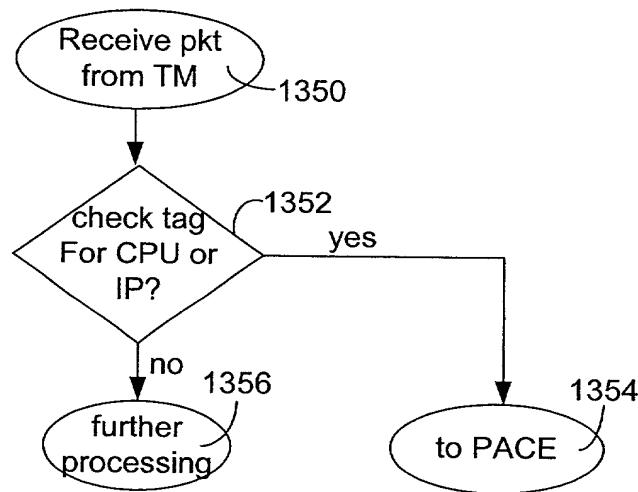


Fig. 13b
(Classification - PPU -
egress)

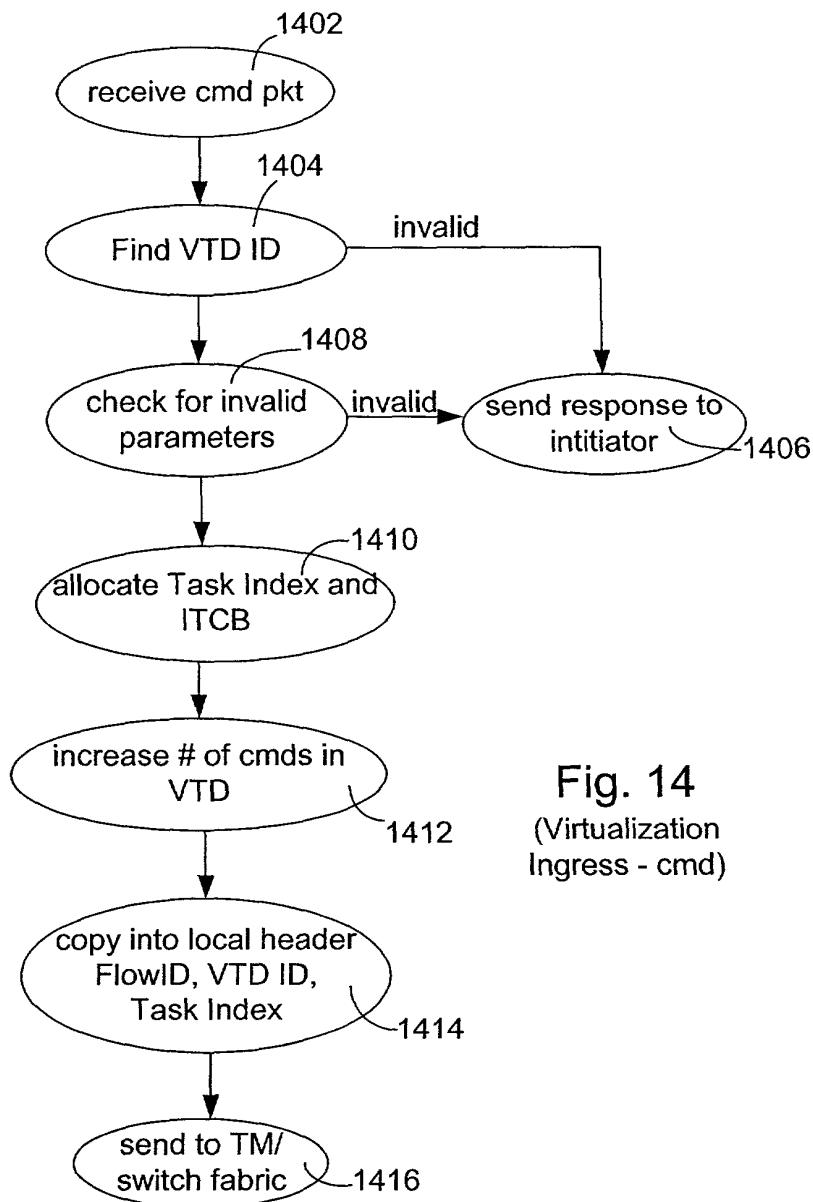


Fig. 14
(Virtualization
Ingress - cmd)

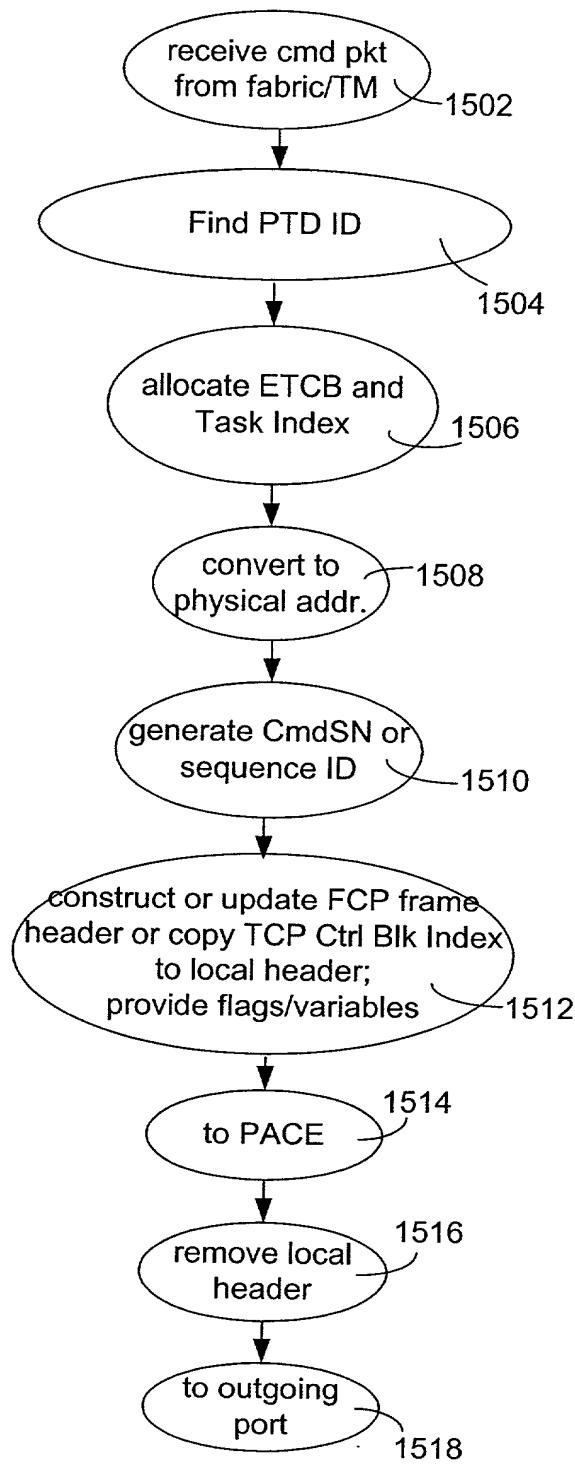


Fig. 15
(Virtualization -
Egress - cmd)

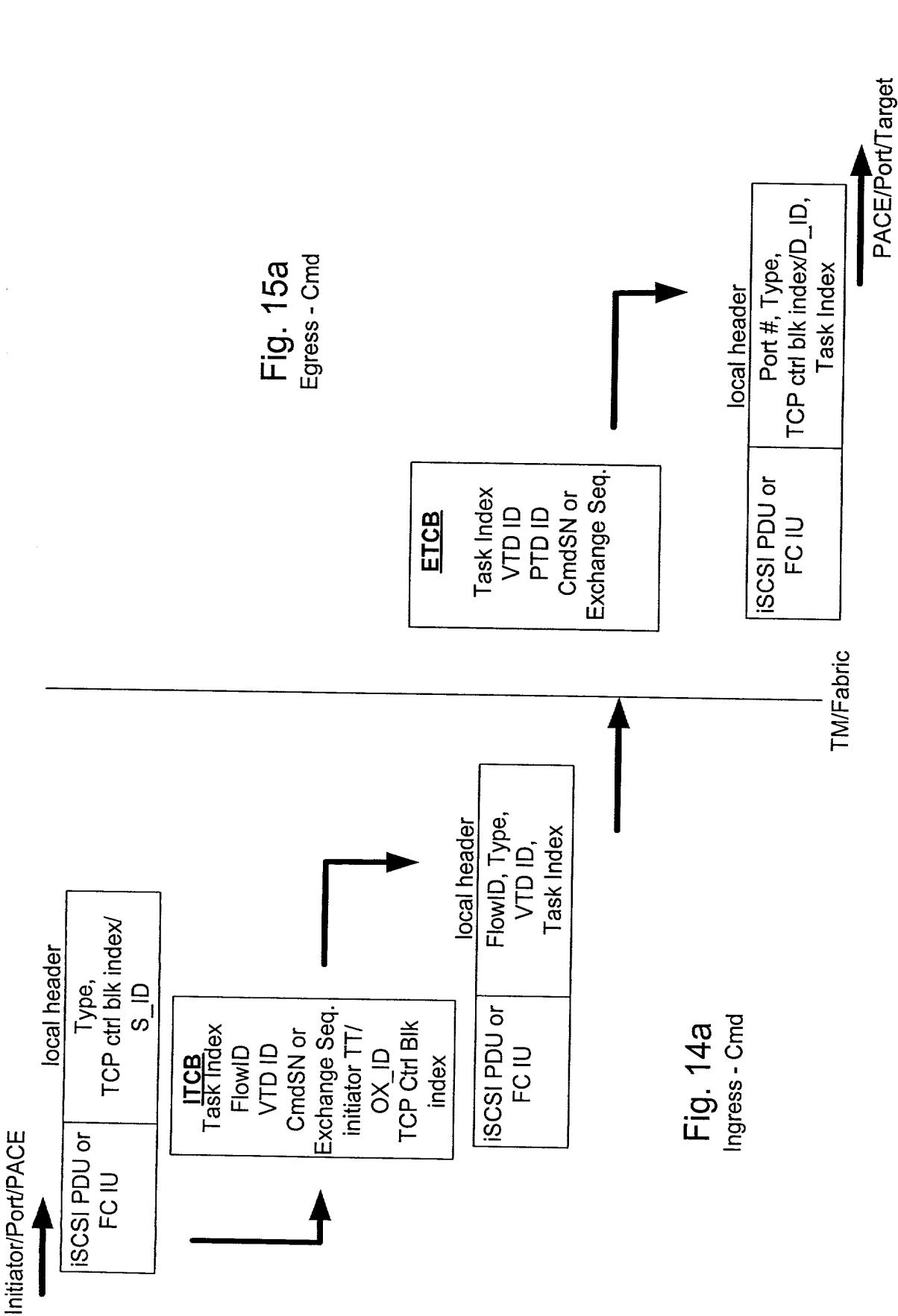


Fig. 15a
Egress - Cmd

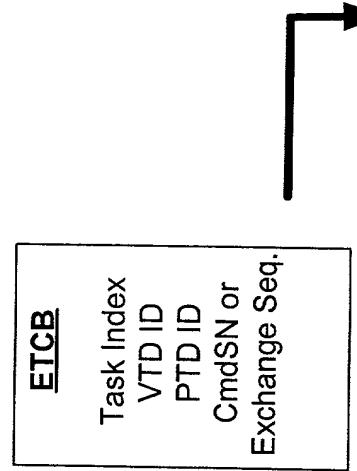


Fig. 15a
Egress - Cmd

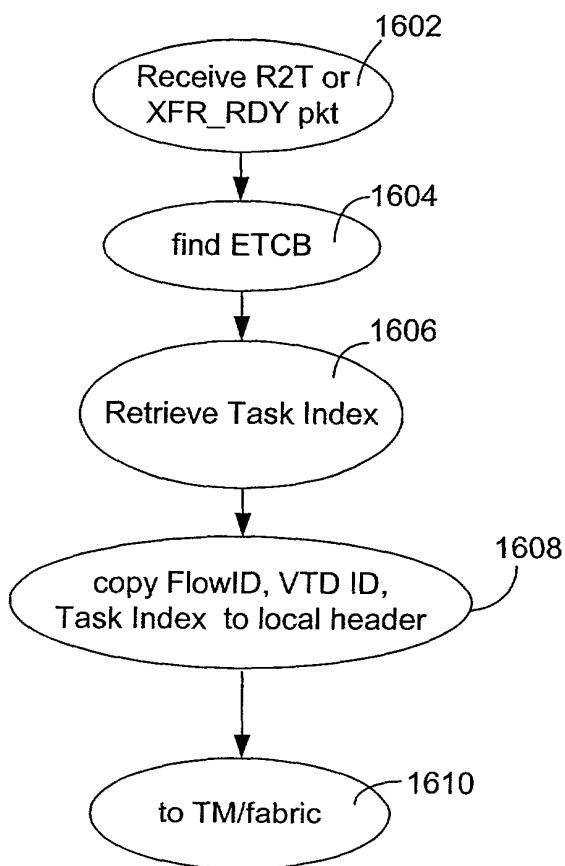


Fig. 16
(Virtualization - Ingress -
R2T/XFR_RDY)

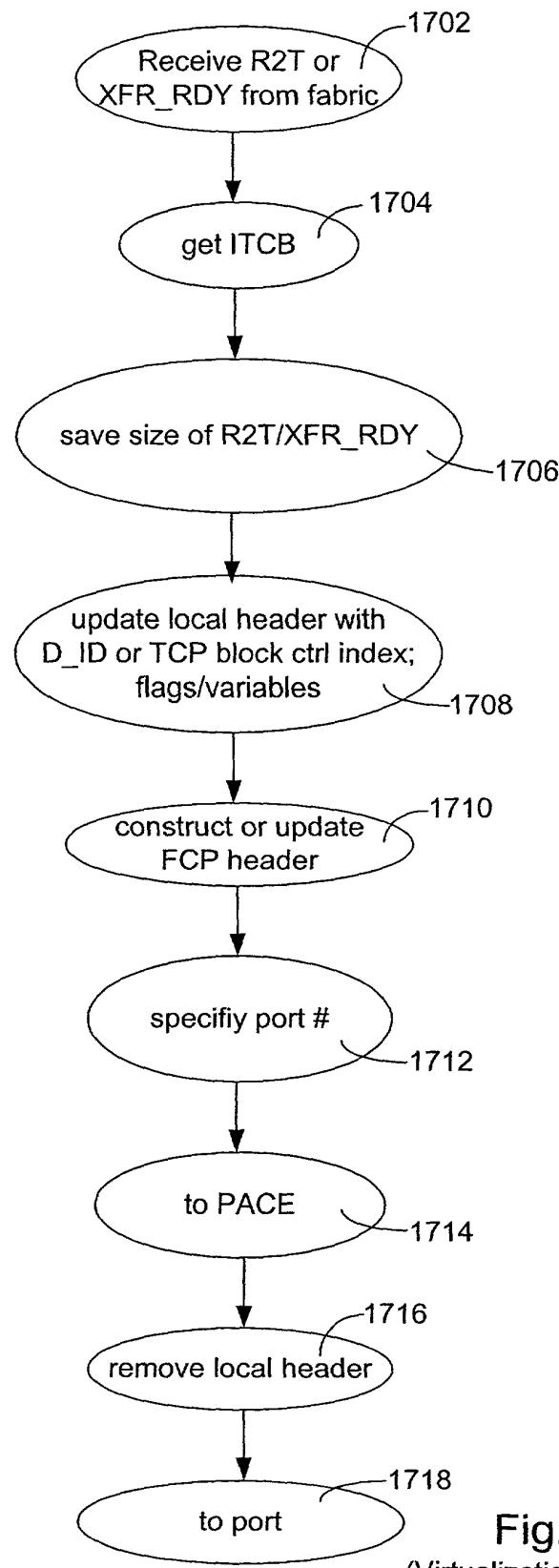
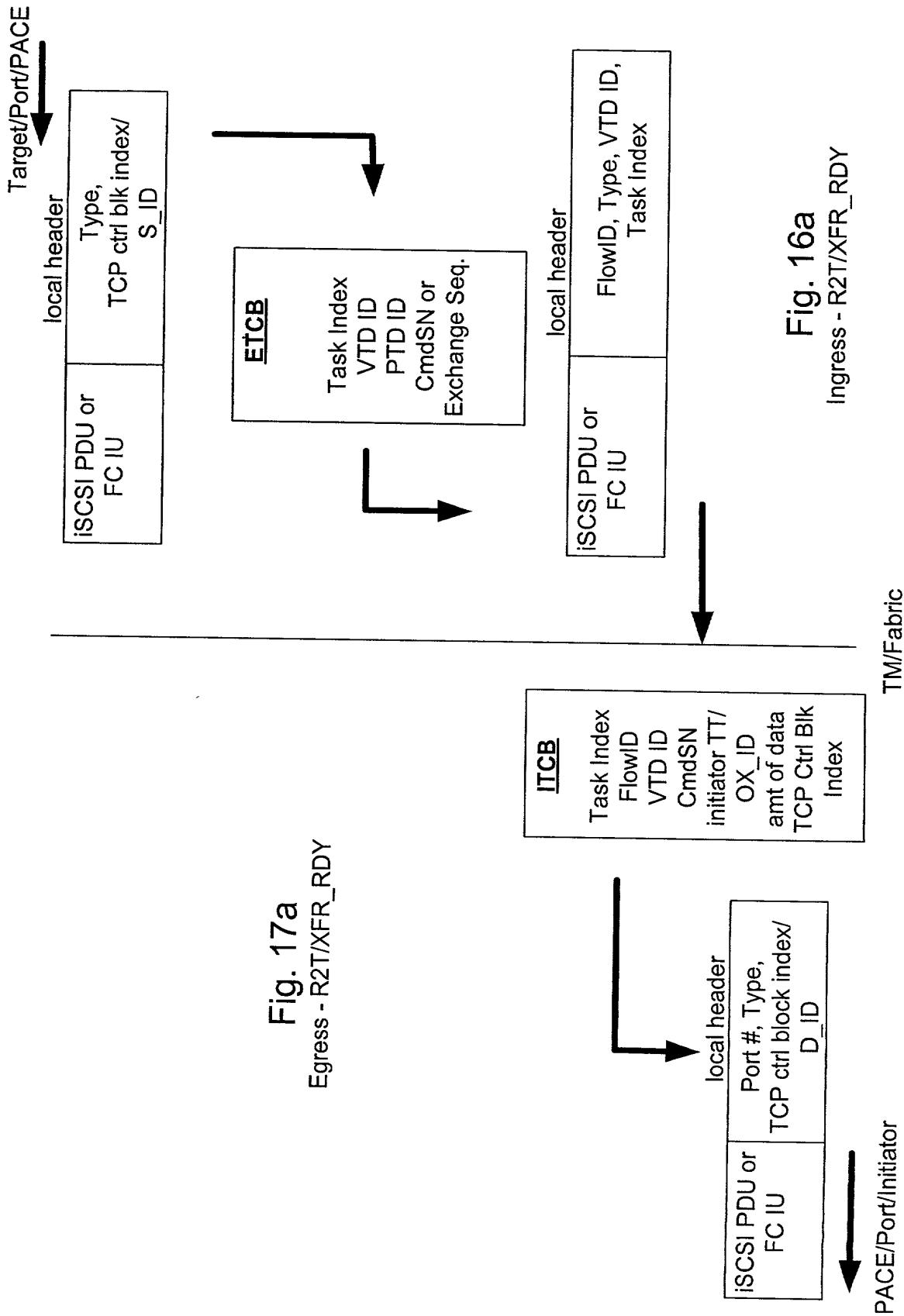


Fig. 17
(Virtualization - Egress -
R2T/XFR_RDY)



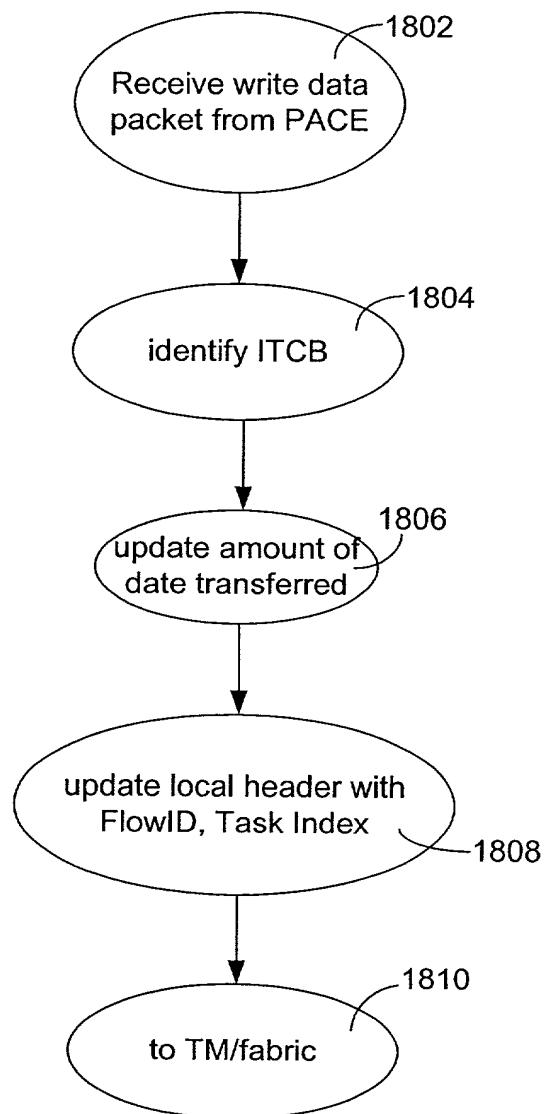


Fig. 18
(Virtualization - Ingress -
write data packet)

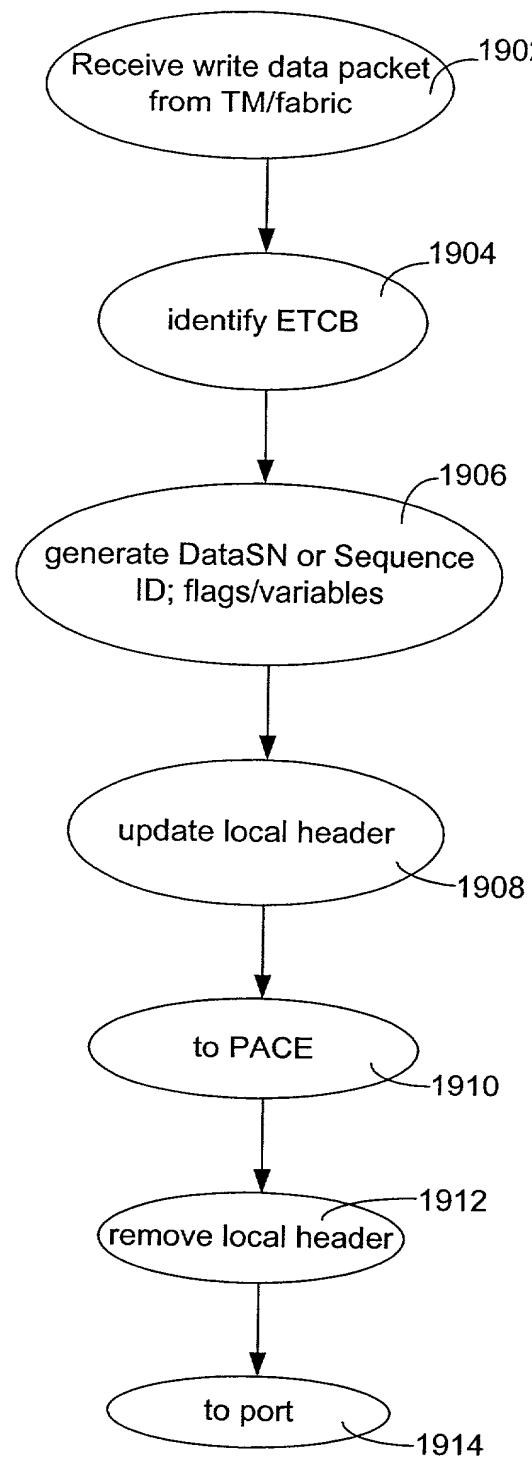


Fig. 19
(Virtualization - Egress -
write data pkt)

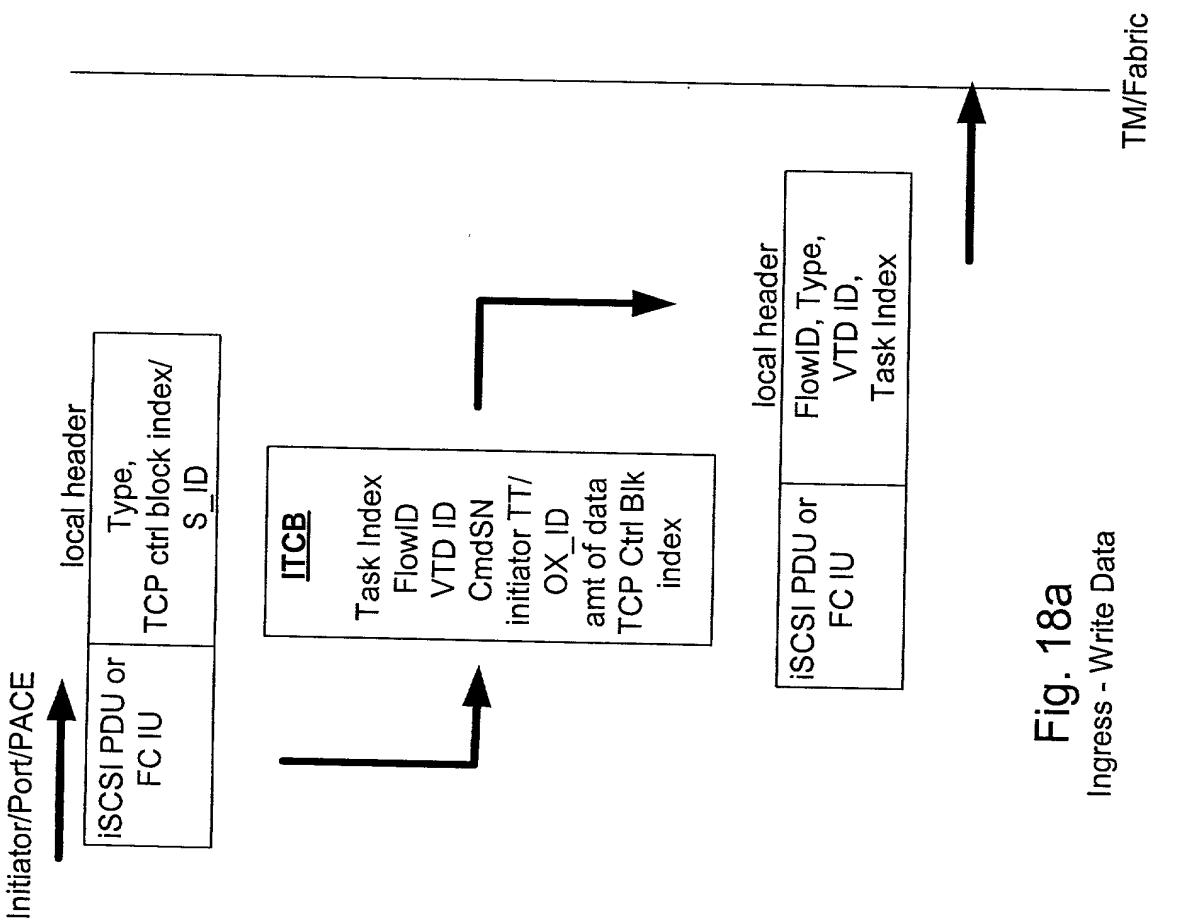


Fig. 18a
Ingress - Write Data

Attorney: Sarah Barone Schwartz Express Mail No.: EL670728857US

AtomEye Docker No.: MARA-01000US1 SBS

The: S10NAGE SWI^{CH} FOR SURFACE AREA NETWORK
Attn: M&E Dept# No.: MABA-01000111 SPS

appreciate sarcasm? C. Loyalty rather than all

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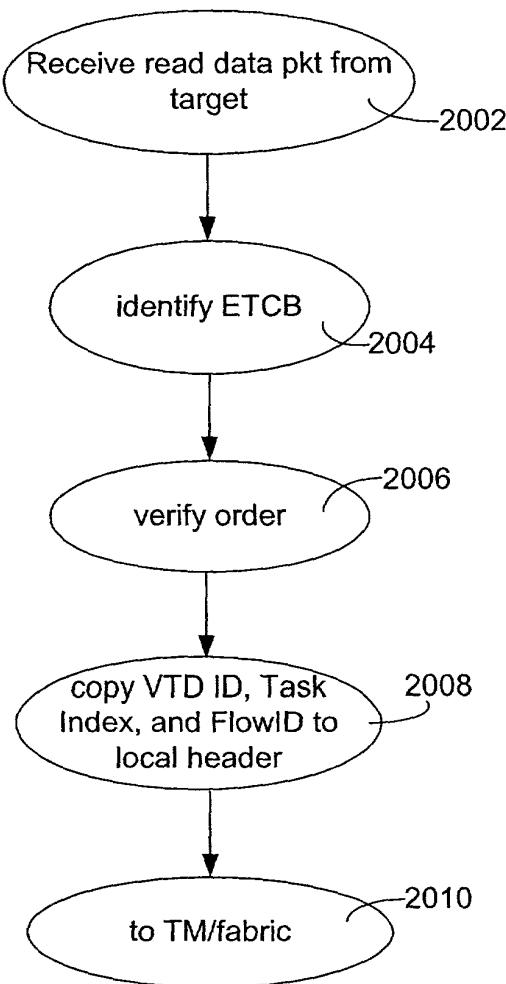


Fig. 20
(Virtualization - Ingress -
Read Data pkt)

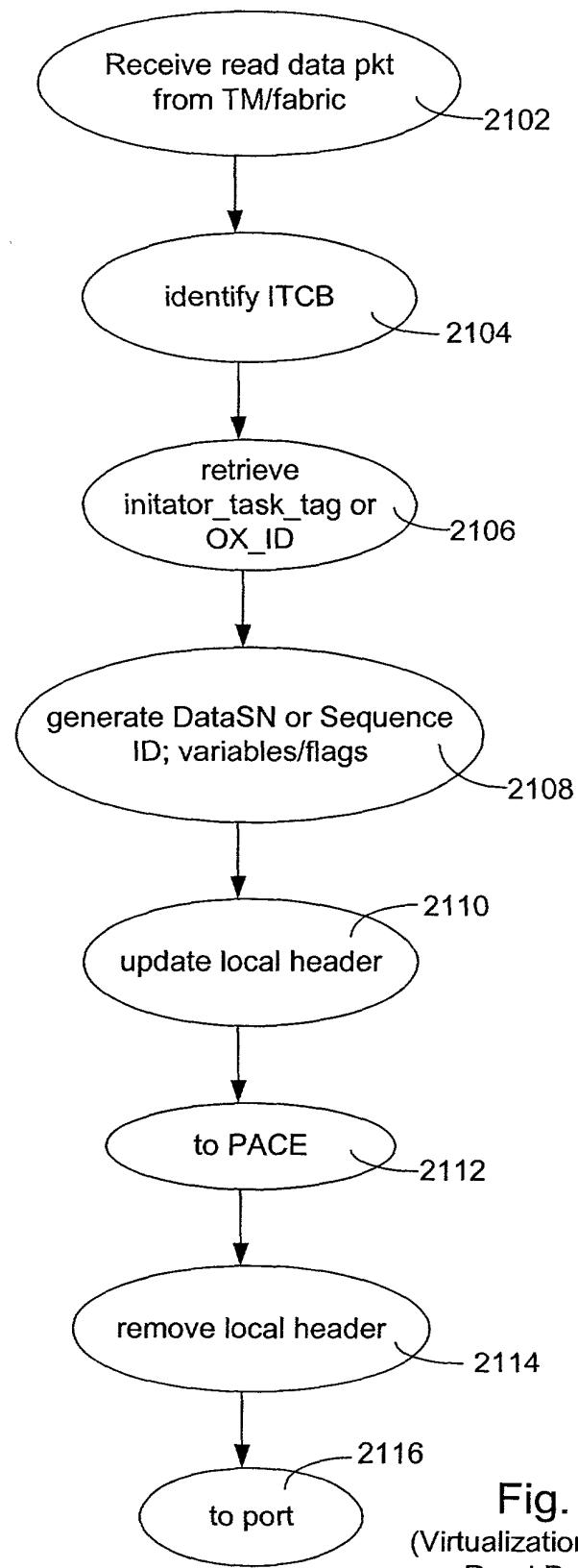
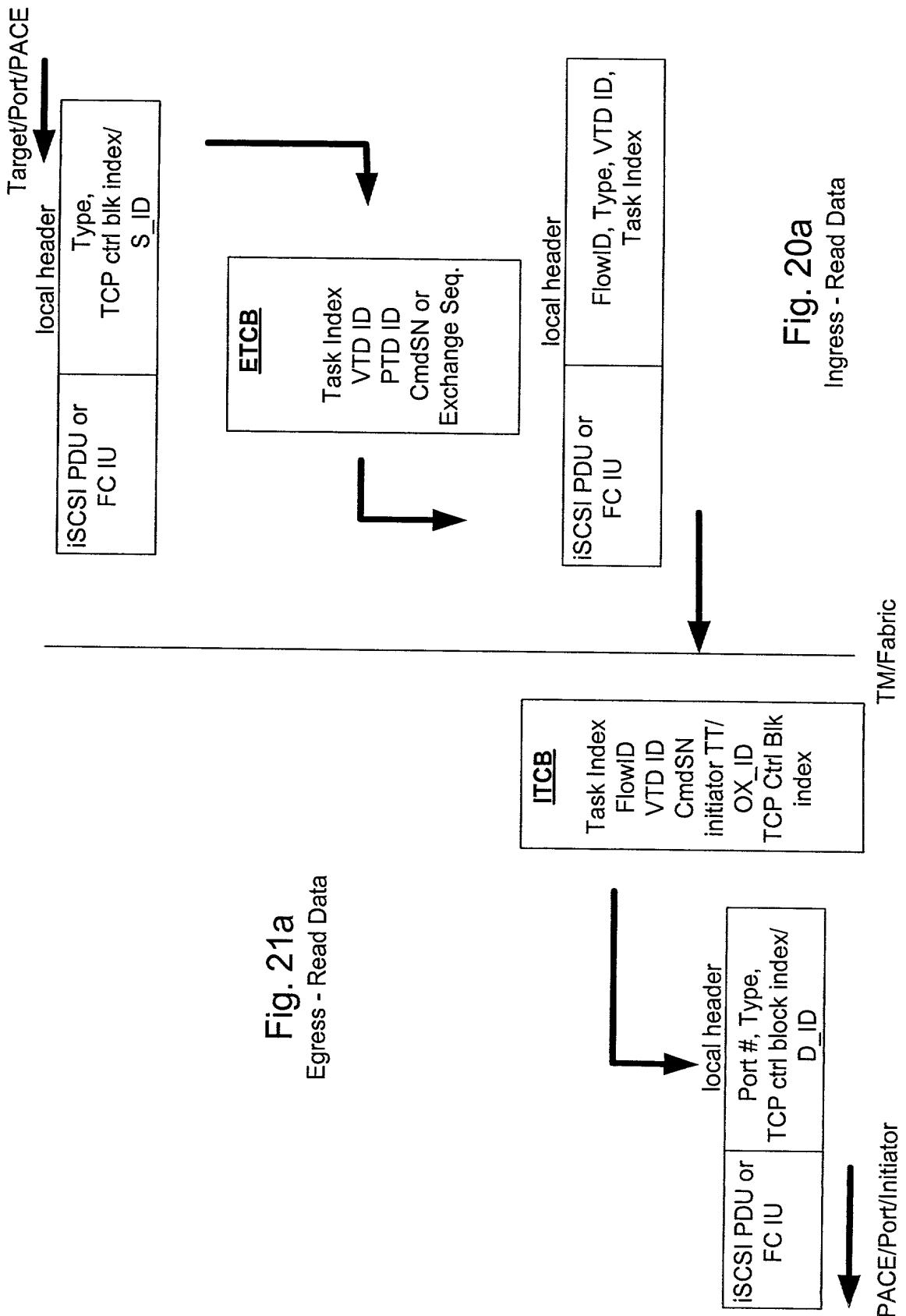


Fig. 21
(Virtualization - Egress-
Read Data pkt)



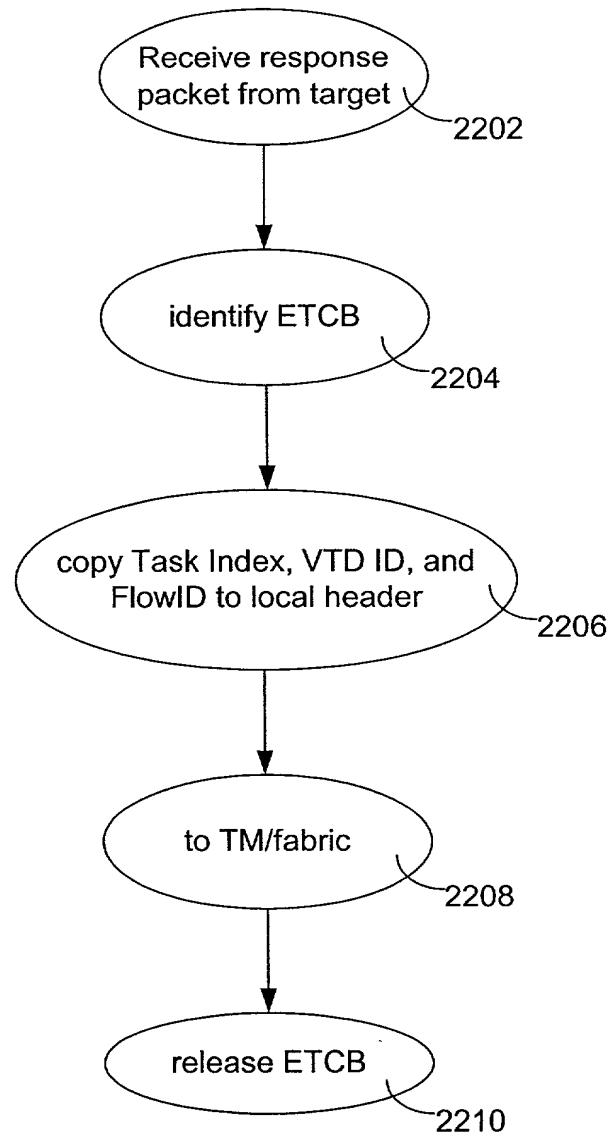


Fig. 22
(Virtualization - Ingress -
response pkt)

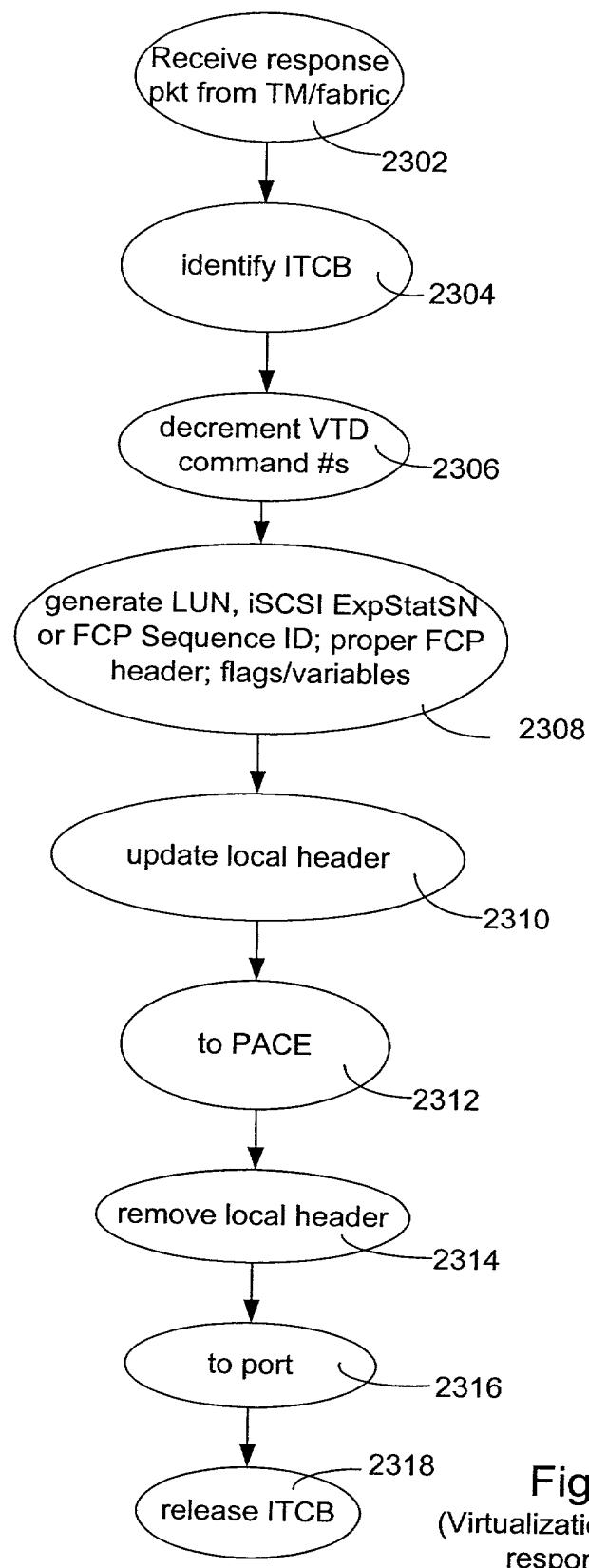
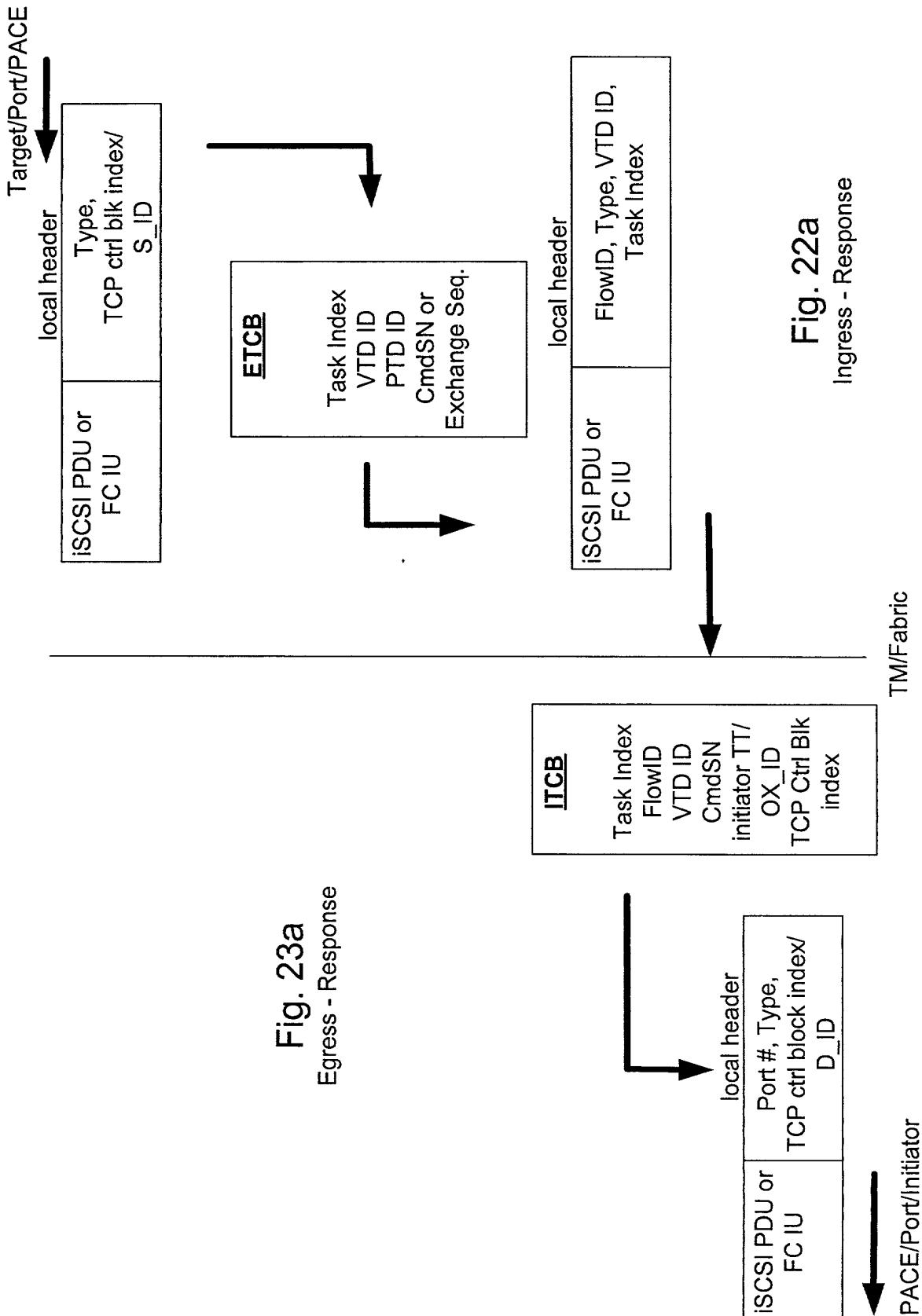


Fig. 23
(Virtualization - Egress -
response pkt)



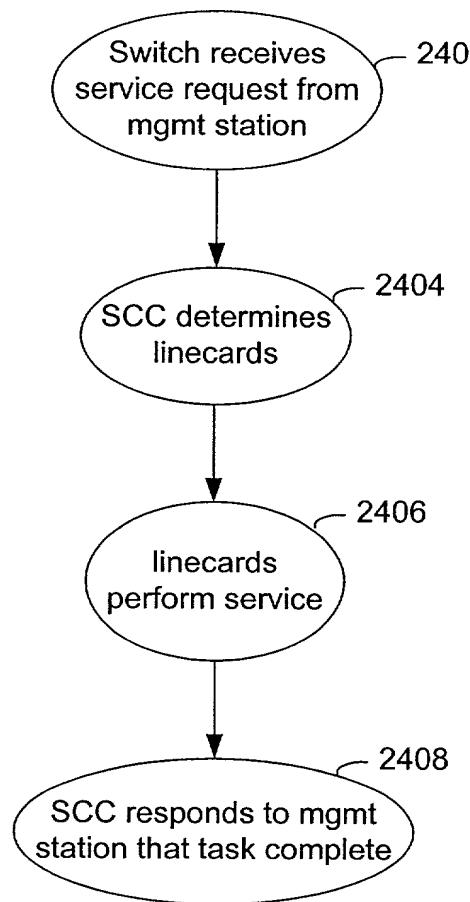


Fig.24

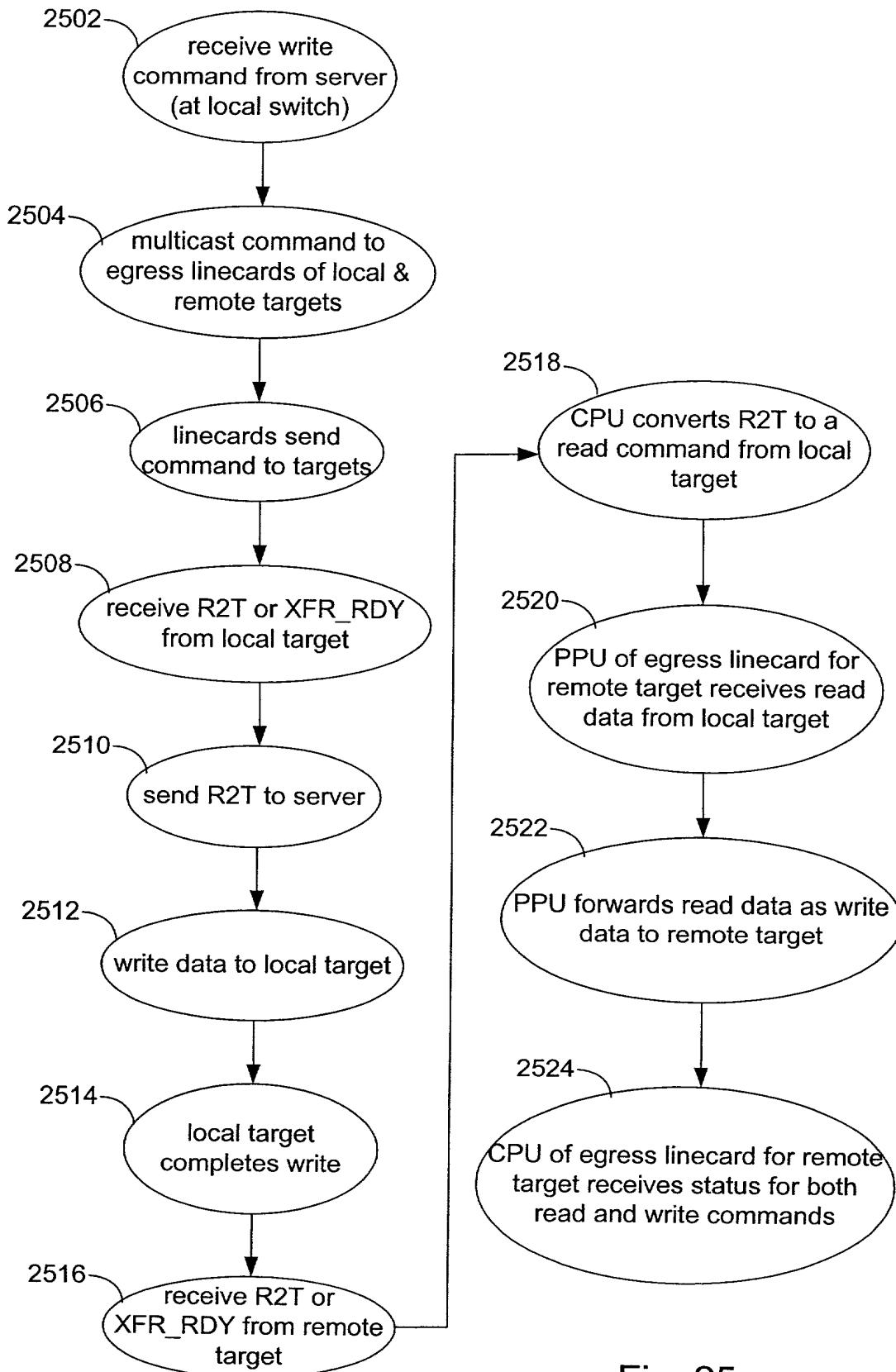


Fig. 25

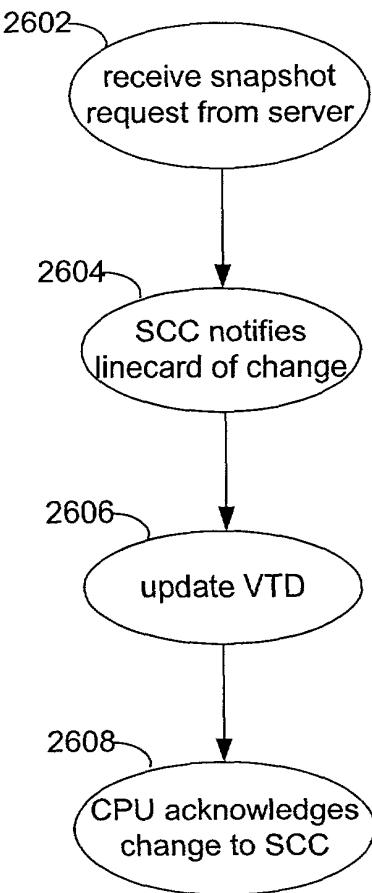


Fig. 26

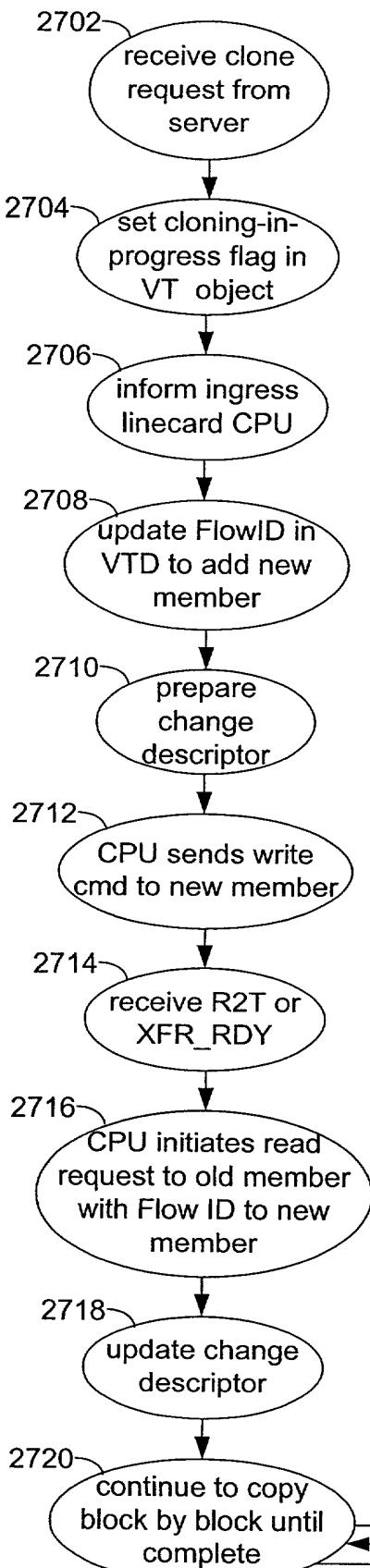
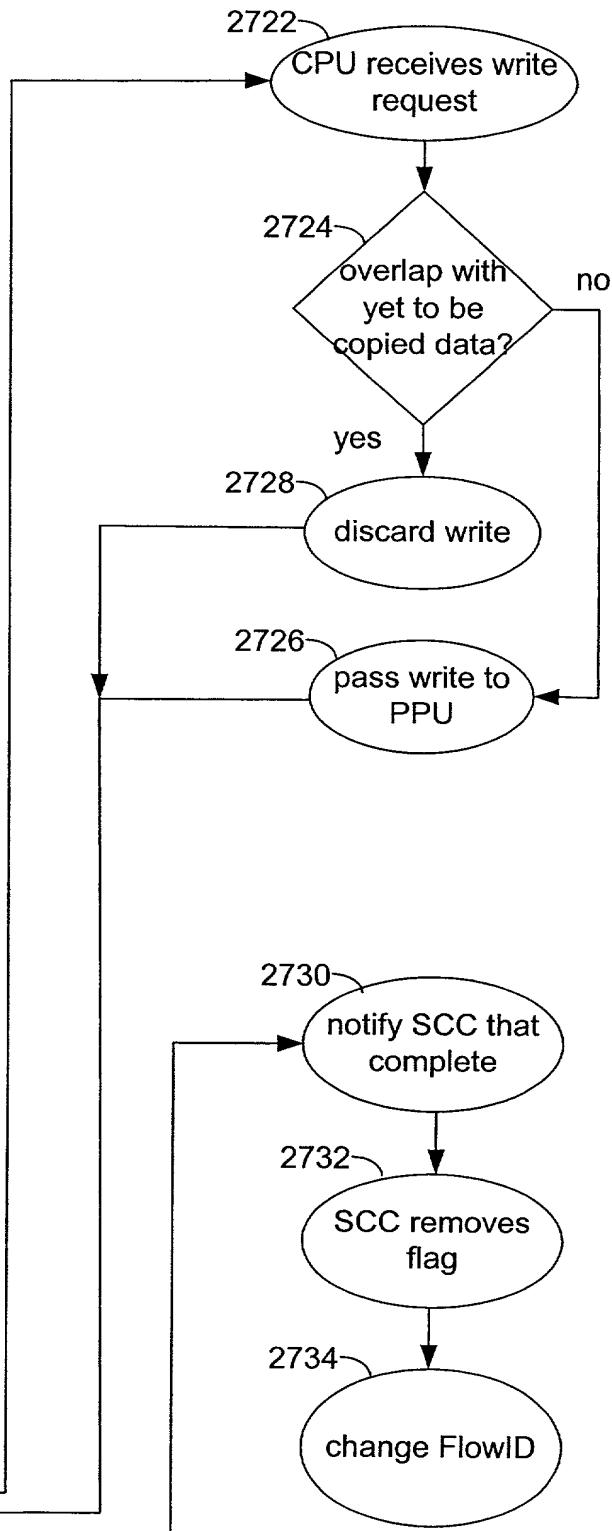


Fig. 27



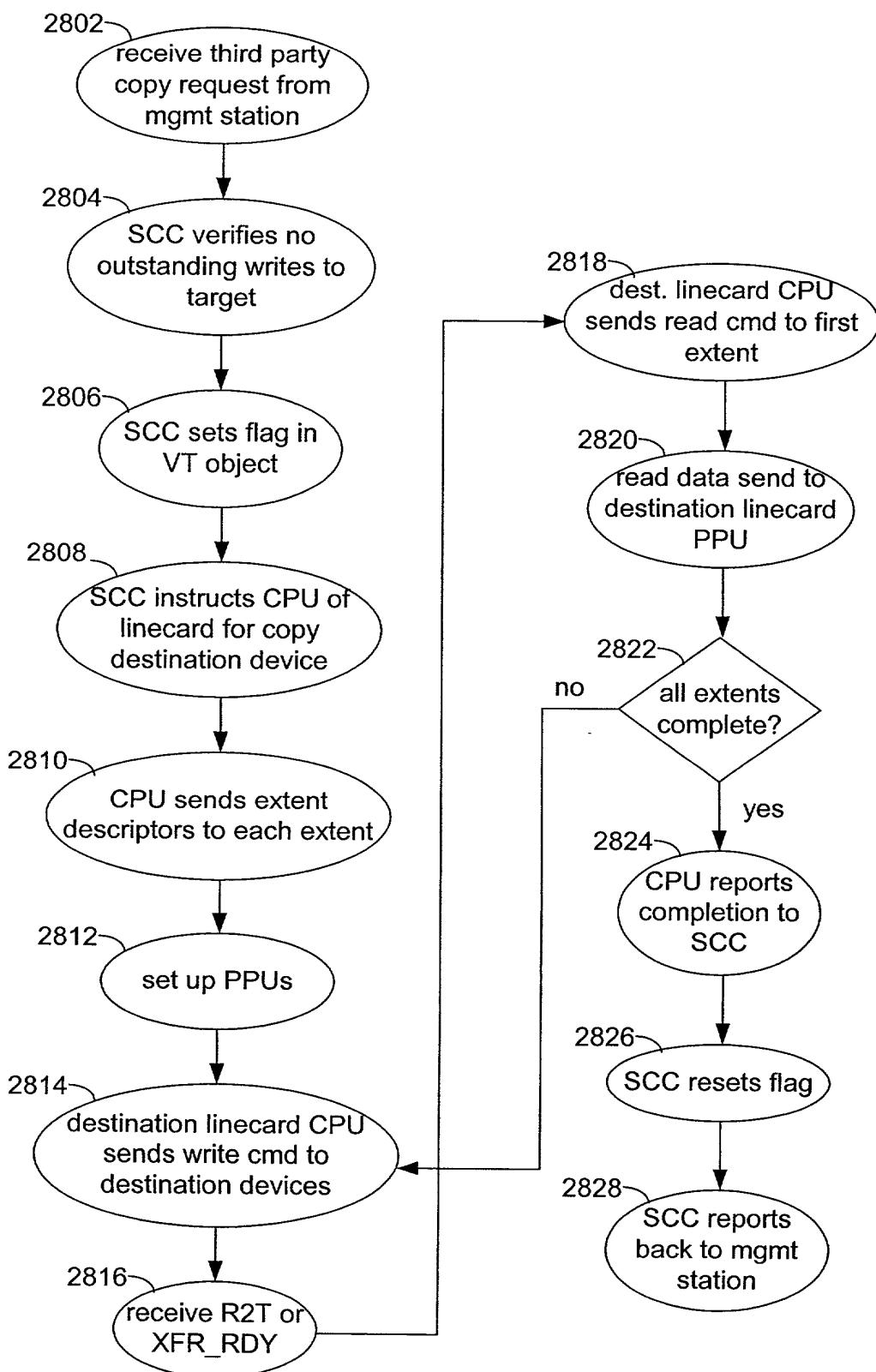


Fig. 28